What is claimed is:

1. A method of reducing hydrogen sulfide content in a medium, comprising:

   adding Fe-MGDA and a peroxide to a medium with a hydrogen sulfide content; and

   reducing the hydrogen sulfide content in the medium.

2. The method of claim 1, wherein the hydrogen sulfide content is lowered though an oxidation reaction.

3. The method of claim 1, further comprising reducing the hydrogen sulfide content to a non-detectable amount.

4. The method of claim 1, further comprising reducing odors caused by hydrogen sulfide.

5. The method of claim 1, further comprising preparing the Fe-MGDA.

6. The method of claim 1, further comprising contacting iron and MGDA to form Fe-MGDA.

7. The method of claim 1, further comprising contacting Fe-MGDA and the peroxide to form a reaction product.

8. The method of claim 1, further comprising contacting Fe-MGDA and the peroxide to form an oxidizing agent.

9. The method of claim 1, further comprising mixing Fe-MGDA and the peroxide prior to adding to the medium containing hydrogen sulfide.

10. The method of claim 1, further comprising mixing Fe-MGDA and the peroxide after addition to the medium containing hydrogen sulfide.

11. The method of claim 1, further comprising adding Fe-MGDA and the peroxide simultaneously to the medium containing hydrogen sulfide.

12. The method of claim 1, further comprising adding Fe-MGDA and the peroxide sequentially to the medium containing hydrogen sulfide.

13. The method of claim 1, further comprising conveying a mixture of the Fe-MGDA and peroxide to the medium containing hydrogen sulfide.

14. The method of claim 1, further comprising dispersing a mixture of Fe-MDGA and the peroxide in liquid form.

15. The method of claim 1, further comprising dispersing a mixture of Fe-MDGA and the peroxide in foam form.

16. The method of claim 1, further comprising dispersing a mixture of Fe-MDGA and the peroxide in solid form.

17. The method of claim 1, further comprising dispersing a mixture of Fe-MDGA and the peroxide in gaseous form.

18. The method of claim 1, further comprising dispersing a mixture of Fe-MDGA and the peroxide in aerosol form.

19. The method of claim 1, further comprising dispersing a mixture of Fe-MDGA and the peroxide in vapor form.

20. The method of claim 1, further comprising determining an optimal dose rate for the Fe-MGDA added to the medium.

21. The method of claim 1, further comprising determining an optimal pH for removing hydrogen sulfide from the medium.

22. The method of claim 1, wherein the pH for reducing the hydrogen sulfide content is between approximately 5 and approximately 9.6.

23. The method of claim 1, further comprising determining an optimal dose rate for the peroxide added to the medium.

24. The method of claim 1, further comprising conveying the medium after treatment with Fe-MGDA and the peroxide.

25. The method of claim 1, further comprising discharging the medium after treatment with Fe-MGDA and the peroxide.

26. The method of claim 1, further comprising measuring the levels of hydrogen sulfide before treatment with Fe-MGDA and the peroxide.

27. The method of claim 1, further comprising measuring the levels of hydrogen sulfide after treatment with Fe-MGDA and the peroxide.

28. The method of claim 1, further comprising determining a reduction in hydrogen sulfide associated with the medium.

29. The method of claim 1, further comprising reducing hydrogen sulfide concentration in the medium to less than approximately 50 parts per million

30. The method of claim 1, further comprising reducing hydrogen sulfide concentration in the medium to less than approximately 20 parts per million.

31. The method of claim 1, further comprising reducing hydrogen sulfide concentration in the medium to less than approximately 10 parts per million.

32. The method of claim 1, further comprising reducing hydrogen sulfide concentration in the medium to less than approximately 5 parts per million.

33. The method of claim 1, further comprising reducing hydrogen sulfide concentration in the medium to less than approximately 1 part per million.

34. The method of claim 1, further comprising reducing hydrogen sulfide concentration in the medium to approximately non-detectable levels.

35. The method of claim 1, wherein the medium containing hydrogen sulfide is selected from: liquid, water, groundwater, leachate, wastewater, sewer

water, blackwater, graywater, bilge water, ballast water, feed water, process water, industrial water, irrigation water, recreational water, pond water, lake water, creek water, river water, rain water, runoff water, pool water, cooling water, non-potable water, potable water, drinking water, semi-pure water, spent ultra-pure water, sour water, waste stream water.

36. The method of claim 1, wherein the medium is selected from: a solid, solids, biosolids, rubbish, trash, refuse, waste, medical waste, radioactive waste, sweepings, scourings, rubble, debris, detritus, scum, grease, sludge, sewage, jetsam, flotsam, soil, clay, dust, sand, gravel, stones, rock, sediment, activated charcoal, paint, chemical mixture.

37. The method of claim 1, wherein the medium containing the hydrogen sulfide is a vapor.

38. The method of claim 1, wherein the medium containing the hydrogen sulfide is a liquid.

39. The method of claim 1, wherein the medium containing the hydrogen sulfide is a slurry.

40. A composition comprising Fe-MGDA, a peroxide, and hydrogen sulfide.

41. A composition comprising a reaction product of Fe-MGDA, a peroxide, and hydrogen sulfide.

42. A method for removing hydrogen sulfide from a medium, comprising contacting the medium with a reaction product of Fe-MGDA and a peroxide.

43. A method of degrading hydrogen sulfide comprising:

contacting a medium containing hydrogen sulfide with a reaction product of Fe-MDGA and a peroxide; and

oxidizing the hydrogen sulfide.

44. A method of degrading hydrogen sulfide comprising:

contacting a medium containing hydrogen sulfide with a reaction product of Fe-MDGA and a peroxide; and

oxidizing the hydrogen sulfide.

45. The method of claim 44, wherein the reaction product is an oxidizing agent.

46. A method for reducing a concentration of a contaminant associated with a medium, comprising:

treating the medium with Fe-MDGA and an oxidizing agent; and

reducing an odor produced by the contaminant.

47. A method for treating sewers, comprising:

adding Fe-MGDa and a peroxide to a medium within a sewer; and

reducing the content of a contaminant within the medium.

48. The method of claim 47, wherein at least one of the Fe-MGDA and the peroxide are in a vapor form.

49. The method of claim 47, wherein at least one of the Fe-MGDAand the peroxide are in a liquid form.

50. The method of claim 47, wherein the contaminant is in a vapor form.

51. The method of claim 47, wherein the contaminant is in a liquid form.

52. The method of claim 47, wherein the contaminant is in solid form.

53. The method of claim 47, wherein the Fe-MGDA is added at a constant rate.

54. The method of claim 47, wherein the FE-MGDA is added at a variable rate.

55. The method of claim 47, wherein the FE-MGDA is added intermittently.

56. The method of claim 47, wherein the peroxide is added at a constant rate.

57. The method of claim 47, wherein the peroxide is added at a variable rate.

58. The method of claim 47, wherein the peroxide is added intermittently.